

## **ABSTRACT**

The wind-driven power station comprises a closed-loop rail track consisting of sections of gradual ascent and descent. The descent section directed upwind is positioned in an artificial tunnel. Basic elongated sections of the rail track are situated across the predominant wind direction in the given area. A carriage with a sail assembly and a generator, whose rotor is connected to the wheel axis, moves along the rail track. A wind directing device is positioned along the basic elongated sections of the track and designed to direct wind upon said sail assembly. Wind flows which pass through channels of the wind directing device change their direction and from the rear push the sail assembly of the carriages and set them into motion. The carriage wheel rotation leads to generator rotor rotation and generation of current.

At all sections of the rail track the carriages are affected by forces pushing them in the same direction.